

(1) 'On- and Off-specification' refers to the WAC 173-303-515(4) Table 1 specifications for used oil fuels that will be burned for energy recovery. Table 1 includes the "*rebuttable presumption*" that is intended as a procedure for determining whether used oil is contaminated with halogenated solvents (i.e., F-listed hazardous wastes). See WAC 173-303-515(4) and 40 CFR Part 279.11 for Table 1; Faxback 13579, 9592.1992(02), RCRA On-Line, December 1992, (<http://yosemite.epa.gov/OSW/rcra.nsf/Documents/5BC31C57E611C793852565DA006F0857>) for additional guidance on applying the rebuttable presumption; and 57 FR, 41579-80, 9/10/92 for justification of the rebuttable presumption.

(2) In May 2000, Ecology adopted major revisions to the standards for management of used oil (SMUO), WAC 173-303-515. Ecology adopted most of the Federal used oil management standards (UOMS) of 40 CFR Part 279. Adoption by reference means that the federal standards are incorporated into state rules and may be enforced as state regulations. Significant differences between SMUO and federal standards include:

- Ecology prohibits mixing dangerous waste with used oil by any generator, including conditionally exempt Small Quantity Generators (CESQG's);
- Ecology prohibits mixing characteristic (ignitable) waste with used oil, even if the resultant mixture does not exhibit the characteristic of ignitability.
- Ecology does not allow metal working fluids formulated with chlorinated compounds to be managed as used oil when burned for energy recovery;
- Ecology has more stringent performance standards for generators accumulating used oil in containers or tanks;
- Ecology allows generators to self-transport more than 55 gallons of used oil;
- Ecology has record keeping requirements for used oil collection centers;
- Ecology has authority to require assessment, repairs, and additional reports of operators of used oil transfer, storage, processing and re-refining facilities.

EPA's decision to establish separate standards for managing used oil (rather than listing used oil as a hazardous waste) was based on a "*presumption of recycling*." This is a critical concept to understand why the federal standards are less stringent for used oil than for other types of hazardous waste. The presumption of recycling was based on established collection, processing, and fuel burning capacity in industrial and shipping sectors throughout the U.S. The standards reflect both performance-based and technical requirements that were intended to protect human health and the environment, and allow used oil to continue to be collected and processed without imposing undue regulatory and financial burdens on the used oil recycling system. This is the foundation for a number of features of the federal (now state) used oil standards including: on- and off-specification standards (WAC 173-303-515(4) - Table 1), allowance for managing materials containing or contaminated with used oil, mixing characteristic hazardous wastes with used oil, and minimal standards for testing, documentation, record keeping, and containment. See 57 FR, 41578, 9/10/92.

* These are the end notes for publication number 06-04-005, *Materials that may or may not be managed as used oil in Washington State*.

- (3) Household DIY generators are exempt from 40 CFR Part 279 regulations. See 279.20(a)(1).
- (4) The definition of “used oil” has three components: 1) refined from crude oil; 2) synthetic oil; 3) used and as a result of such use is contaminated with physical or chemical impurities. The Washington Dangerous Waste rule and the Federal RCRA rule definitions are identical. See WAC 173-303-040 and 40 CFR Part 279.1 definitions. Other references include the preamble to the 2000 revisions to the *Dangerous Waste Regulations* (Pub #00-004-014, May 2000, pages 5-9).
- (5) Note that some brake fluids contain chlorinated compounds. These used oils are subject to the rebuttable presumption if they have greater than 1,000 ppm chlorine after mixing with used oil. If, after testing, it is determined that the chlorinated compounds in this waste stream are solely from used brake fluids, it is sufficient evidence to rebut the presumption of mixing with listed solvents.
- (6) Ecology guidance is to hot drain filters for 24 hours prior to disposing of the filter carcass as scrap metal. Undrained filters can be managed under UOMS. See “A Guide for Automotive Repair Shops”, Pub #92-BR-12, revised May 2003, page 12; <http://www.ecy.wa.gov/pubs/92br12.pdf>.
- (7) Heat transfer oils come from various sources. A typical source is electrical equipment; transformers, capacitors, switches, and bushings. Older PCB containing electrical equipment has mostly been taken out of service, or had the heat transfer oil drained and replaced with non-PCB oil before being put back in service. While much of the used heat transfer oils generated now was non-PCB oil when used to refill equipment, it may still contain low concentrations of PCBs from residuals left in older equipment that was put back in service. Used oils < 2 ppm PCBs; not regulated under the TSCA; may be managed under -515 Used oil 2 to 49 ppm; subject to TSCA and, if burned for energy recovery must be burned in a Part 279 certified high efficiency boiler or furnace; or permitted incinerator. Used oil > 50 ppm; subject to TSCA rules for management and disposal. See 40 CFR 761.20(e); WAC 173-303-515(4) footnote at bottom of Table 1; and, exemption from Dangerous Waste rules for PCBs managed under TSCA at WAC 173-303-071(k).

Note that the Washington state-only listed waste code WPCB has limited application. WPCB wastes do not necessarily include all PCB contaminated oils. The source of WPCB oils may only be from the salvaging, rebuilding or discarding of transformers, capacitors or bushings. This does not include spills from operating equipment, retrofilling of fluids in operating equipment, or PCB contaminated oils from various other types of equipment like resistors or switches. The definition of WPCB wastes comes directly from RCW 70.105.105, so any attempt to broaden the scope of WPCB would have to go through the legislative process. In most cases, Ecology staff should recommend that PCB contaminated oils be managed under TSCA requirements using the exemption of WAC 173-303-071(k) rather than require management as WPCB listed waste.

- (8) Refrigerant oils may become contaminated with chemical compounds used in refrigerant gases when seals leak or pumps fail. Refrigerant oils containing chlorofluorocarbons (CFCs) and/or hydrochlorofluorocarbons (HCFCs) in concentrations above 4,000 ppm may be managed as off-specification used oil under Part 279 and are not subject to the rebuttable presumption because of generator knowledge of the source of chlorinated compounds. Under DW Rules, however, CFC/HCFC are halogenated organic compounds that will cause the used oils to be classified as extremely hazardous waste (EHW) in concentrations over 10,000 ppm.

(9) Washington State prohibits managing chlorinated machine oils as used oil, if it will be burned for energy recovery. Metal working fluids containing chlorinated paraffins which are reclaimed or re-refined may be managed under the SMUO. See the preamble to 2000 DW rule revisions (Pub #00-004-014, May 2000, page 8).

(10) Used oil with less than 2 ppm PCB can be managed as on-specification used oil. Until 2000, the specifications for used oil to be burned for energy recovery (Table 1 in WAC 173-303-515) contained a concentration limit for PCB at 2 ppm. This was dropped in 2000 and explained in a footnote to Table 1. The reason for dropping PCBs as a specification was because the TSCA rules were revised to regulate oils containing greater than 2 ppm PCB.

(11) This is a change from past policy on management of materials containing or contaminated with used oil (see Pub #02-04-031, December 2002; issue of “free-flowing used oil”).

Waste waters containing low concentrations of used oil are generated from a variety of industrial, transportation, maintenance, and domestic activities. A brief list includes bilge waters, metal cutting, pressure washing, metal finishing, printing, machine lubrication, vehicle washing, and road or parking lot runoff. The ability to recover used oil from the sources depends upon the type and amount of oil present, presence of solid particulate matter, use of detergents or dispersants, and the whether the oil is emulsified. Properly designed, operated and maintained gravity flow oil/water separators can remove non-emulsified oil fairly effectively down to 15 to 50 ppm (the amount of oil remaining in the effluent). Emulsified oils and soluble oils (e.g., water soluble cutting oils) typically can only be removed from water through chemical (pH adjustment, flocculation), physical (centrifuge or ultrafiltration), or thermal treatment. The question of how much oil in water is recoverable (oil that a generator can ship to an off-site used oil processor) therefore, depends on the factors discussed above, the equipment and process employed, and cost considerations. No minimum concentration standard for oil in water is available to decide what oil/water mixtures may qualify for management as “used oil”. In 57FR 48022 (9/23/91), EPA discussed a ‘de minimus quantity’ of used oil in water. EPA described ‘de minimus’ in a qualitative manner based on drips or drops. In the preamble to 2000 DW rule revisions, Ecology stated that oil/water/solid mixtures with recoverable amounts of used oil may be managed as used oil (Pub #00-004-014, Appendix A, pages 7 & 8). No quantitative limits were cited. As a rule of thumb, light fraction petroleum will create a sheen on water at or above 15 ppm. Note that for the purposes of this guidance, ‘recoverable amounts’ of used oil in water is not a regulatory requirement, so cannot be enforced.

(12) Note that tank bottoms and residues from virgin fuel oil product storage tanks and petroleum distillates are not eligible for management as used oil.

(13) Free flowing oil recovered from rags or absorbents may be managed under the SMUO. The residuals are solid waste subject to designation. Ecology Spills Program recommends triple bagging residuals and disposing as solid waste, with approval of local solid waste operator. See Focus sheet on Cleanup of Small Spills, Ecology, June 2003; <http://www.ecy.wa.gov/pubs/0308005.pdf>.

(14) Ecology does not encourage gasoline or other fuels to be mixed with used oil. Ecology guidance to auto repair shops recommends that fuels drained from filters be kept in separate containers (See Pub #92-BR-12, page 5). However, Federal UOMS allow fuel products to be mixed with used oil and the mixture to be managed as used oil (see 40 CFR Part 279.10(d). Ecology adopted this portion of the federal UOMS.

(15) Soils contaminated with recoverable used oil may be managed as used oil. Petroleum contaminated soils that will be managed by treatment, remediation or disposal are subject to standards and oversight of the Model Toxics Control Act including applicable and relevant requirements of the *Dangerous Waste Regulations*. See "Guidance on Remediation of Petroleum Contaminated Soils", Ecology Pub #91-30, Revised 1995.

(16) See WAC 173-303-522 for separate standards for managing spent antifreeze and preamble to 1998 DW rule revisions Appendix C, pages 11 & 12.

(17) Note that the examples of solvents and thinners specifically include low flash parts washing solvents. Ecology's position remains that mixtures of spent solvents and used oil do not qualify to be managed as used oil. Parts washing solvents, even if formulated as a product with a flash point greater than 140 degrees F, which become contaminated with used oil are a solid waste subject to designation when spent. This is because the primary waste stream is spent solvent, and the spent solvent mixture may contain other constituents (dissolved metals, chlorinated or toxic compounds) that would cause it to designate as a dangerous waste. If necessary, Ecology may apply the "non-free flowing" element of 279.10(c) as stated in Pub # 02-04-031, December 2002.

(18) Federal UOMS allow used oil with up to 49 ppm PCBs to be managed as off-specification used oil but may only be burned in Part 279 burners. Note that the PCBs must not be from TSCA regulated sources. If the PCB in used oil is from a TSCA regulated source, the whole volume of used oil (even if less than 50 ppm once mixed, is TSCA regulated). Note that there are notification, certification, reporting and record keeping requirements for generators, marketers and burners of used oil containing 2 – 49 ppm PCB contained in TSCA regulations at 40 CFR 761.20(e). See correspondence on how to document notifications and certifications in Institutional Memory, record 3071.970428; letter from J. Sachet to D. Prill, April 28, 1997.

(19) Although an oily item is being cleaned, the oily material on the item is not free flowing used oil and thus is not subject to 40 CFR 279 or WAC 173-303-515. As the original material is not subject to the UOMS or the SMUO, the material generated is also not subject to the UOMS or the SMUO. It cannot be used oil and cannot be managed as used oil.